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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,552	09/25/2003	William J. Colucci	EI-7520	5492

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EXAMINER

TOOMER, CEPHIA D

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/670,552	<b>Applicant(s)</b> COLUCCI ET AL.	
	<b>Examiner</b> Cephia D. Toomer	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/23/06;4/1/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office action is in response to the election/restriction of March 23, 2006 and April 1, 2006 in which Applicant elected Group I, claims 1-20 without traverse. Claims 21-22 were canceled. The restriction requirement is FINAL.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is rejected because it contains an improper Markush group.

In Claim 17, the terms "hydrocarbonyl succinimides" appear twice in the claim.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-3 and 5-20 are rejected under 35 U.S.C. 102(a) or 102(e) as being anticipated by Macduff (US 6,458,172).

5. Macduff teaches a fuel additive composition comprising a Mannich detergent, a fluidizer and optionally a succinimide detergent. Macduff teaches that this additive composition reduces intake valve deposits in internal combustion engines (see abstract).

The Mannich detergent is prepared from the reaction of a hydrocarbyl phenol, an aldehyde and an amine (see col. 1, lines 49-55). The fluidizer may be a polyetheramine as set forth in the present claims (see col. 1, lines 56-57) or a polyether (polyoxyalkylene) that has a molecular weight within Applicant's claimed range (see col. 3, lines 15-19) or a the fluidizer may be a mixture of the polyetheramine and polyether. The succinimide detergent is prepared by reacting a polyamine and a hydrocarbyl-substituted succinic acylating agent (see col. 3, lines 20-24). The polyether and polyetheramine anticipates the claimed molecular weights when n and q are at least 15 and the R substituents are lower alkyl. The fuel composition contains methylcyclopentadienyl manganese tricarbonyl (MMT) and other conventional additives (see col. 6, lines 46-69). The fuel is gasoline, diesel , gasoline and alcohol or diesel and ether (see col. 5, lines 44-65).

Accordingly, Macduff teaching all the limitations of the claims anticipates the claims.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 8-11, 14-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonnell (US 5,997,593).

McDonnell teaches a gasoline composition comprising a lubricity additive and a cyclopentadienyl manganese tricarbonyl compound (see abstract; col. 5, lines 34-40). McDonnell teaches that the gasoline of his invention may be used in direct injection engines (see col. 1, lines 48-52). Therefore, the fuel composition would inherently perform applicant's method. The fuel may contain oxygenates, amine detergents such as Mannich base and carrier fluids (see col. 5, lines 25-34, 41-57; Table I).

Accordingly, McDonnell teaching all the material limitations of the claims anticipates the claims.

7. Claims 1, 6-14 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cunningham (US 5,551,957).

Cunningham teaches a gasoline fuel compositions comprising fuel-soluble a PIB succinimide detergent/dispersant, fuel soluble liquid carrier and fuel-soluble cyclopentadienyl manganese tricarbonyl compounds. Cunningham teaches that the compositions "sharply reduce the formation or accumulation of engine deposits such as intake valve deposits in internal combustion engines" (see abstract). Cunningham teaches that the gasoline may be combined with oxygenates (col. 1, lines 54-60). The carrier fluid for the fuel composition may be one or a blend of mineral oils, PAO, and one or more polyoxyalkylene compounds (see col. 6, lines 12-23; col. 7, lines 27-47). The cyclopentadienyl manganese compound may be cyclopentadienyl manganese tricarbonyl or methylcyclopentadienyl manganese tricarbonyl ( see col. 8, lines 14-37).

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The composition also contains conventional fuel additives (see col. 9, lines 63-67 and Examples).

Accordingly, McDonnell teaching all the limitations of the claims anticipates the claims.

8. Claims 1-4, 8-14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 0142399.

WO teaches a fuel composition for direct injection gasoline engines comprising a Mannich detergent (see abstract). The Mannich detergent is prepared as set forth in the present claims (see page 3, lines 13-18; page 5, lines 11-18). Conventional additives such as dispersant/detergents and MMT may be present (see page 8, lines 1-11). The base fuel may be gasoline alone or in combination with an oxygenate (see page 8, lines 12-29). The Mannich detergent can be used with a liquid carrier such as a polyalphaolefin, mineral oils and poly(oxyalkylene) compounds having a molecular weight of about 500-3000 (see page 9, lines 1-20).

Accordingly, WO teaching all the limitations of the claims anticipates the claims.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Macduff in view of Udelhofen (US 4,231,759).

Macduff fails to teach that the alkyl-substituted hydroxyaromatic compound used in preparing the Mannich base is alkylated cresol. However, Udelhofen teaches that the alkyl-substituted hydrocarbyl compounds of Macduff may be replaced with alkylated cresol (see abstract; col. 4, lines 59-65).


It would have been obvious to one of ordinary skill in the art to replace the hydroxyaromatic compound of Macduff with alkylated cresol because Udelhofen teaches that in addition to the hydroxyaromatic compounds others which may be used include alkyl-substituted cresol.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Cephia D. Toomer  
Primary Examiner  
Art Unit 1714

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